

Directed Reading B

Section: The Cell Cycle (pp. 152–157)

1. Why is it important for your body to produce millions of new cells by the time you finish reading this sentence?

THE LIFE OF A CELL

- _____ 2. When does the cell cycle begin?

- a. when the cell is formed
- b. when the cell divides
- c. when the cell uses energy
- d. when the cell takes in oxygen

- _____ 3. When does the cell cycle end?

- a. when the cell is formed
- b. when the cell divides and makes new cells
- c. when the cell uses energy
- d. when the cell takes in oxygen

4. What must a cell do before it can divide to make a new cell?

5. What makes sure that each new cell receives all the DNA of the parent cell?

6. A cell without a nucleus is a(n) _____ cell.

7. A cell with a nucleus is a(n) _____ cell.

8. A chromosome is the main ring of DNA in a(n) _____ cell.

9. A chromosome is made up of DNA and protein in the nucleus of a(n) _____ cell.

10. Are bacteria prokaryotic cells or eukaryotic cells?

Directed Reading B *continued*

- 11.** Bacteria create new cells through a kind of cell division called _____.
- 12.** When binary fission is complete, the result is two cells that each contain one copy of _____.
- 13.** Eukaryotes have more _____ than do prokaryotes.
- 14.** Humans have _____ chromosomes, while fruit flies have only _____ and potatoes have _____ chromosomes.
- 15.** Chromosomes that line up in pairs are made up of similar chromosomes called _____.
- 16.** In the beginning of the eukaryotic cell cycle, the cell grows and copies its _____ and _____.
- 17.** After a chromosome is duplicated, the two copies are called _____.
- 18.** Where are chromatids held together?
- _____
- _____
- _____
- 19.** What happens during the first stage of the cell cycle in a eukaryotic cell?
- _____
- _____
- _____
- _____
- _____